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golian. The author does not mean to imply that our Indians are strictly Mongolians, or that America has been populated from Asia, for he says "the American race is, somatologically speaking, not a type, but has characteristics which can only be called Mongoloid."

F. W. HODGE.

Washington City.

Laboratory Calculation and Specific-Gravity Tables. By JOHN S. ADRIANCE, A.M. Second edition. New York, John Wiley & Sons. Interleaved. 114 p.

IN some respects the author has in this second edition given us a new book, having enlarged the original tables and added others of importance. This increase of substance has, too, a value of its own in works such as these, being of far greater importance here than similar additions in general and descriptive works, for not only is the reputation of a book of tables based upon the accuracy of the figures, but also largely upon its completeness. We have all relied more or less upon like works for aid in laboratory calculations, and yet when certain data are found absent, how soon the book will fall into disuse entirely and make its way to the top shelves! Mr. Adriance, however, himself a consulting chemist and fully alive to the necessities of the case, has chosen not only such tables as are in constant use, but also those of frequent or less frequent need, covering extraordinarily well the field of ordinary chemical analysis. Such a work as this is of true assistance, and despite the claim urged by some chemists as to the possible introduction of error when using "ready-made results," we believe the chance of error to be greater when these same results have to be calculated under the strain of physical fatigue, following a long day or night of analytical or experimental work. Naturally all tables of factors, and all data of this kind, should be proven in moments of leisure, and in important cases, notably those involving legal testimony, they should be thrown aside altogether; but for daily use in the laboratory, they are invaluable in the saving of time and mental labor. Not only is the substance of the book "good," but in appearance it is neatness itself, each word and figure is clear-cut and distinct, an element highly important in tabular statements. The book is interleaved

and ample opportunity thus given the chemist for additions and remarks.

C. P.

Chemical Theory for Beginners. By LEONARD DOBBIN, Ph.D., and JAMES WALKER, Ph.D., D. SC., Assistants in the Chemistry Department, University of Edinburgh. London and New York, Macmillan and Co., 1892. 240 p.

Of the vast number of text-books bearing upon chemistry, we have but few treating of its foundation or theory. The smaller works merely touch upon theoretical discussion, while the larger treatises presuppose an extensive knowledge of the same. It is then a fact that only those students with the advantages of able instruction and scientific associations arrive at a really clear understanding of the ground-work of chemical notation, reaction and law. "Students enter the laboratory at once," is a familiar phrase in many college announcements, and there are excellent arguments for such a custom, provided a thorough study of theory accompanies the practical demonstration. More often, however, in general science courses the theory is disposed of in one or two brief lectures, all effort being concentrated upon a rapid advance into the field of "the elements, their compounds, their characteristics and reactions."

The above work is, we believe, rather unfortunately named, for while it will be easily understood by a beginner, and is a most excellent book for such a one, still it can and will be read advantageously by many advanced students and practical chemists. The wording is smooth and attractive, always interesting, never fatiguing; the student is carried forward, by an easy and natural progression, from the nature of things to a study of chemical action, of combustion, the laws of Boyle, Charles, and Avogadro, of density and of the atomic weights. Chemical notation is not reached until the 12th chapter, where, with the knowledge already gained, its discussion is of value and intelligible to the beginner. The later chapters contain an entirely non-mathematical exposition of the more important principles of general chemistry reviewed in the light of recent research, treating of the kinetic molecular theory, mass action, solution, electrolysis equivalence, the periodic law, etc.

C. P.

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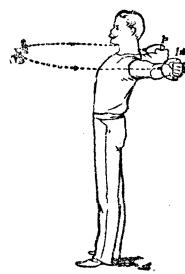
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